



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,207	11/30/2000	Dimitri P. Zafiroglu	RD8120USNA	2829

23906 7590 09/11/2002

E I DU PONT DE NEMOURS AND COMPANY
LEGAL PATENT RECORDS CENTER
BARLEY MILL PLAZA 25/1128
4417 LANCASTER PIKE
WILMINGTON, DE 19805

EXAMINER

GOFF II, JOHN L

ART UNIT PAPER NUMBER

1733

DATE MAILED: 09/11/2002

G

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/727,207

Applicant(s)

ZAFIROGLU, DIMITRI P.

Examiner

John L. Goff

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 16 is/are pending in the application.
- 4a) Of the above claim(s) 14, 15 and 17-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of species I, claim 13 is generic, with further election of sub-species I-B, claim 16, in Paper No. 5 is acknowledged.

Information Disclosure Statement

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 20 (first mentioned on page 4, line33) and 56 (first mentioned on page 10, line 32). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Art Unit: 1733

Specification

4. The disclosure is objected to because of the following informalities: On page 2, line 13 delete - - a - -. On page 4, line 36 delete "14B" and insert therein - - 14L - -. On page 5, line 2 delete "14B" and insert therein - - 14L - -. On page 8, line 2 delete "if" and insert therein - - of - -. On page 11, line 12 delete "14B" and insert therein - - 14L - -. On page 15, line 14 delete "24L³" and insert therein - - 24³ - -.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-13 and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. In claim 1, the term "vicinity" is unclear and confusing. It is unclear whether or not the binder is directly applied to the root portions and stitching thread underlaps? Does "vicinity" include the root portions and stitching thread underlaps? This issue should be clarified and reworded as appropriate.

8. The term "about" in claim 13 is a relative term which renders the claim indefinite. The term "about" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably

Art Unit: 1733

apprised of the scope of the invention. The tolerance provided by the term “about” is unclear. It is suggested to remove the term from the claim.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 2, and 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Reinhardt (U.S. Patent 2,261,096).

Reinhardt is directed to a method of applying an adhesive binder to a needled fiber backing wherein after applying the binder to the backing the backing undergoes mechanical flexing to ensure complete penetration of the adhesive into the backing and the needled fibers (Figure 1 and Column 1, lines 23-30 and Column 2, lines 28-33). Reinhardt teaches an adhesive binder comprising a suspension of unvulcanized latex (a thermoplastic) applied to a needled fiber backing (Figure 1 and Column 2, lines 8-11 and 44-48 and Column 3, lines 48-53). The adhesive binder is applied by feeding the backing through a tank containing the adhesive binder or by spraying the backing with the adhesive binder suspension (Column 2, lines 8-11 and Column 4, lines 11-14). After the binder is applied the needled backing passes through pressure rolls and calender rolls that mechanically flex the backing into and out of the plane of the backing to ensure complete penetration of the adhesive into the backing and needled fibers (Figure 1 and Column 2, lines 20-33). The calender rolls are heated by steam or other means

Art Unit: 1733

(Column 2, lines 28-30). After flexing the backing is fed to a dryer operating at 104-116 °C

(Column 2, lines 33-38).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 3-5 and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reinhardt as applied in paragraph 10 above, and further in view of the admitted prior art (Specification pages 1-2) and Blyth et al. (U.S. Patent 4,619,853).

Regarding claims 3-5 and 8-9, Reinhardt teaches all of the limitations in claims 3-5 and 8-9 as applied above except for a teaching on using a liquid bath to heat the binder when mechanically flexing the backing. As noted above, Reinhardt teaches using steam to heat the binder when flexing the backing. However, the use of a liquid bath such as a Beck dye bath is a known technique in the art for heating a backing with applied coating as suggested by the admitted prior art and Blyth et al. It would have been within the purview of one of ordinary skill in the art at the time the invention was made to modify Reinhardt to incorporate the liquid bath shown by the admitted prior art and Blyth et al. as a means for heating the binder when flexing the backing as only the expected results would be achieved.

The admitted prior art is directed to the prior art process of applying a binder to a carpet backing. The admitted prior art teaches that dyeing and Beck dye baths are well known in the art

Art Unit: 1733

(Specification pages 2, 9, and 10). Blyth et al. are directed to stain resistant carpets (Column 2, lines 8-13). Blyth et al. teach a method for rendering the carpet stain resistant by applying a condensation product at a temperature of 90 °C (Column 3, lines 60-66). Blyth et al. teach immersing the carpet in a Beck dye bath as a means for heating the carpet (Column 4, lines 2-5)

Reinhardt is further silent as to drying the backing for at least two minutes. However, as noted above the dryer operates at a temperature of 104-116 °C, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to dry the backing for an amount of time sufficient to dry the binder.

Regarding claims 10-12, Reinhardt teaches all of the limitations in claims 10-12 as applied above except for a teaching on scouring the backing. However, the admitted prior art teaches that scouring is a well known finishing process in the art, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method taught by Reinhardt to incorporate scouring as suggested by the admitted prior art to substantially remove all oil and finish from the fibers.

13. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reinhardt as applied in paragraph 10 above, and further in view of Hackler (U.S. Patent 4,871,604).

Reinhardt teaches all of the limitations in claims 13 and 16 as applied above except for a teaching on the adhesive binder comprising a powder having a particle size of 1-500 microns and a melting point of 85-100 °C. It is noted, Reinhardt is not limited to latex as the adhesive binder (Column 2, lines 44-46 of Reinhardt). Hackler is directed to a thermoplastic adhesive binder powder used to strengthen carpet fiber bond points (Column 3, lines 36-40). Hackler teaches

Art Unit: 1733

that the binder has a particles size of 25-100 microns and a melting point of 100-170 °C (Column 2, lines 20-24). Hackler further teaches that the binder may be applied as a dispersion (liquid) coating (Column 3, lines 21-24). It would have been within the purview of one of ordinary skill in the art at the time the invention was made to modify the method taught by Reinhardt to incorporate the binder powder taught by Hackler as only the expected results would be achieved.

14. Claims 1, 2, 6, 7, 13, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hackler in view of Reinhardt.

As noted above, Hackler is directed to a thermoplastic adhesive binder powder that is applied to carpet backing to strengthen carpet fiber bond points (Column 3, lines 36-40). Hackler teaches that the binder has a particles size of 25-100 microns and a melting point of 100-170 °C (Column 2, lines 20-24). Hackler further teaches that the binder may be applied as a dispersion (liquid) coating (Column 3, lines 21-24). Hackler is silent as to mechanically flexing the backing after applying the binder. However, it is known in the art to mechanically flex the backing after applying the binder to ensure complete penetration of the adhesive as shown above by Reinhardt, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hackler to incorporate the mechanical flexing technique taught by Reinhardt to ensure complete penetration of the adhesive.

Reinhardt is directed to a method of applying an adhesive binder to a needled fiber backing wherein after applying the binder to the backing the backing undergoes mechanical flexing to ensure complete penetration of the adhesive into the backing and the needled fibers (Figure 1 and Column 1, lines 23-30 and Column 2, lines 28-33). Reinhardt teaches an adhesive binder comprising a suspension of unvulcanized latex (a thermoplastic) applied to a needled fiber

Art Unit: 1733

backing (Figure 1 and Column 2, lines 8-11 and 44-48 and Column 3, lines 48-53). The adhesive binder is applied by feeding the backing through a tank containing the adhesive binder or by spraying the backing with the adhesive binder suspension (Column 2, lines 8-11 and Column 4, lines 11-14). After the binder is applied the needled backing passes through pressure rolls and calender rolls that mechanically flex the backing into and out of the plane of the backing to ensure complete penetration of the adhesive into the backing and needled fibers (Figure 1 and Column 2, lines 20-33). The calender rolls are heated by steam or other means (Column 2, lines 28-30). After flexing the backing is fed to a dryer operating at 104-116 °C (Column 2, lines 33-38).

15. Claims 3-5 and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hackler and Reinhardt as applied in paragraph 14 above, and further in view of the admitted prior art and Blyth et al.

Regarding claims 3-5 and 8-9, Hackler and Reinhardt teach all of the limitations in claims 3-5 and 8-9 as applied above except for a teaching on using a liquid bath to heat the binder when mechanically flexing the backing. As noted above, Reinhardt teaches using steam to heat the binder when flexing the backing. However, the use of a liquid bath such as a Beck dye bath is a known technique in the art for heating a backing with applied coating as suggested by the admitted prior art and Blyth et al. It would have been within the purview of one of ordinary skill in the art at the time the invention was made to modify Hackler as modified by Reinhardt to incorporate the liquid bath shown by the admitted prior art and Blyth et al. as a means for heating the binder when flexing the backing as only the expected results would be achieved.

Art Unit: 1733

The admitted prior art is directed to the prior art process of applying a binder to a carpet backing. The admitted prior art teaches that dyeing and Beck dye baths are well known in the art (Specification pages 2, 9, and 10). Blyth et al. are directed to stain resistant carpets (Column 2, lines 8-13). Blyth et al. teach a method for rendering the carpet stain resistant by applying a condensation product at a temperature of 90 °C (Column 3, lines 60-66). Blyth et al. teach immersing the carpet in a Beck dye bath as a means for heating the carpet (Column 4, lines 2-5)

Hackler and Reinhardt are further silent as to drying the backing for at least two minutes. However, as noted above the dryer operates at a temperature of 104-116 °C, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to dry the backing for an amount of time sufficient to dry the binder.

Regarding claims 10-12, Hackler and Reinhardt teach all of the limitations in claims 10-12 as applied above except for a teaching on scouring the backing. However, the admitted prior art teaches that scouring is a well known finishing process in the art, and it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method taught by Hackler as modified by Reinhardt to incorporate scouring as suggested by the admitted prior art to substantially remove all oil and finish from the fibers.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is **703-305-7481**. The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

Art Unit: 1733

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



John L. Goff
September 4, 2002



Supervising Examiner
Technology Center 1733